



NOAA P-3 N43RF CBLAST- HURRICANE ISABEL INVESTIGATION FLIGHT 3



Flight ID: 030914I

Sensor or system

INE
Accelerometer
Temperature Probe
Dew Point Probe
Altitude (for vertical wind)
Static Pressure
Dynamic Pressure
Time Source
Constants File

Number or Name

2
2
1
1 (General Eastern)
Radar Altimeter 159
Rosemount Fuselage
Rosemount Fuselage 1281
Micro 99
CO3033.CON

Notes:

MISSION WAS ABORTED AT 2021 DUE TO PROBLEMS WITH ENGINE 3.

There were several time/data gaps during this flight which occurred during the times 212411-212420, 212931-212940, 213241-213250, 213341-213350, 213411-213420, 213441-213450, 213511-213520, 213541-213550, 213611-213620, and 213641-213650.

RA-232 was substituted for RA-159 from 145201-145747 (take-off), 171246-173036, and 220238-221900 (landing) due to spiking. Due to a large PQAF (Dynamic Attack Pressure) - PQF1 (Dynamic Pressure) separation caused by low-level flying, PQF1 was substituted into PQAF with an offset of 2.1 to minimize this difference from 173211-202154.

All other instruments worked optimally during the flight. However, several times during the flight, the dewpoint temperature exceeded the ambient temperature resulting in a RH >> 100%. This was likely due to heavy rain (as reflected in the J-W Liquid Water Sensor data), a wet-bulb effect on the total temperature sensor, and/or an artificial warming of the dewpoint sensor as it tried to remove excess moisture. No corrections were made during these events.

The aircraft INE positions were renavigated with respect to GPS.

SPECIAL NOTE!!! Locations 80, 81 and 82 of record five on the standard tape contain vertical ground, vertical air and vertical speeds, respectively, computed using Dave Jorgensen's vertical wind algorithm.
It is recommended that these values be used for vertical wind analysis.

	Takeoff	Landing
Aircraft Static Pressure	1013.1 mb	1010.2 mb
Corrected Tower Pressure	1012.2 mb	1009.8 mb

Flight Director: Paul Flaherty (813) 828-3310 ext. 3094

Flt ID: 030914I	From: TISX	To: TISX
Flt No: 03-79	Blk In: 2220	ATA: 2217Z
ETD: 15Z	Blk Out: 1448Z	ATD: 1455Z
ETE: 7+00	Blk Time: 7+32 7.5	Flt Time: 7+22 7.4
Sponsor Org: NOAA HRD	Program: CBLAST NOAA	Purpose: HURR LABEL

AOC Personnel

AC: TEBEST, R ✓	Sys Eng: TONG, R ✓
CP: TENNESEN, D ✓ / STRONG, T	Data Sys: LYNCH, T ✓
Nav: BRUNNAN BRAKOB, D ✓	Radar:
FE: BAST / FLOYD, D / CURRY, J	GPS/BT: SMITH, J ✓
FD: FLAHERTY, P ✓ / DAMIANO, A ✓	Cld Phys:
Avionics: SANS SOUCI, D ✓	

Participating Scientists / Visitors / AOC

Name (Last, First)	Activity on Aircraft	Affiliation
BLACK, M ✓	PI	HRD
ABERSON, S ✓	RADAR	HRD
LAKSHU, J ✓	VIS SCI	SCRIBS
ULHORN, E ✓	RADAR	HRD
FRENCH, J ✓	VIS SCI	NOAA / ARL
* DRUMMAN, W ✓	VIS SCI	HRD
* VAN FLEET ✓	PRESS	FOX-ORLANDO

Proposed/Actual Mission Remarks (Recco, Fixes, Storm, PENET, NHOP #)

290111 TEAL 57 1145Z
 INT 23.3 65.2 140_{ft} 930mb
 12 23.8 66.8 140_{ft}
 ID- 2205 / 6635
 2400
 6717 Geometric e

DEWPOINT 2 OUT
 TURN OFF 1650
 DEWPOINT 2 BACKUP 1704

ENGINE 3 F/O'D 2021

1642 Z
 23 47 N
 66 45 W

U.S. Dept. of Commerce / NOAA / Aircraft Operations Center

AOCWF-2

Alt ID: 030914I Time Off: 1440 Z Time On: 2217 Z

	AVC (Take Off)	WX Station (Take Off)	AVC (Land)	WX Station (Land)
Pressure	1013.1	29.96	1010.2	29.89

	Number	Data Disposition / Date / Quality
Alt Lvl Tapes	2	
adar Tapes	1	
loud Physics Tapes		
ideo Tapes	4	
XBT		
XCP		
XCTD		
ropsondes	12	
SUNDBOY'S	3	

Video

	Forward	Left Side	Right Side	Down	Remarks
Time On					
Time Off					
Rate					

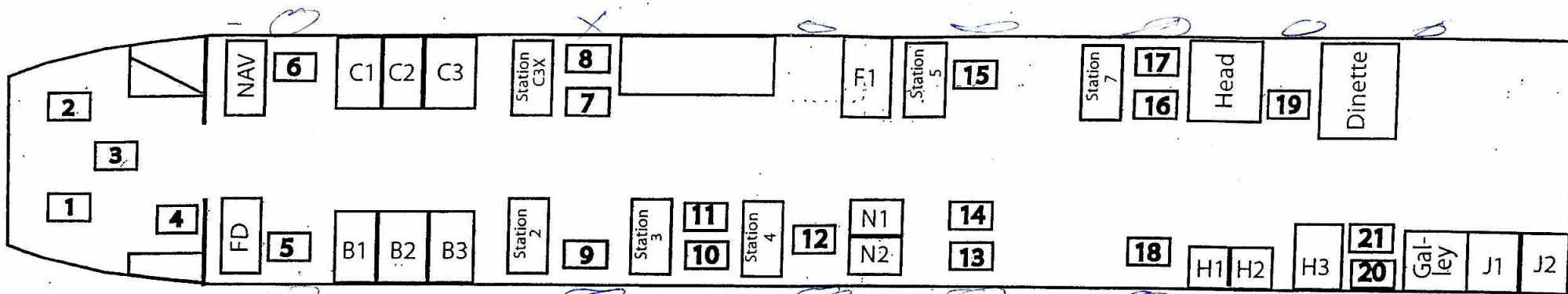
Remarks

DATE		SCHEDULED RX TIME	AIRCRAFT NUMBER	FLIGHT DIRECTOR
WX MISSION IDENTIFIER				OB NUMBER
VORTEX DATA MESSAGE				
A	14 1/642 Z	DATE and TIME of FIX		
B	23 DEG 47 MIN N S	LATITUDE of FIX		
	06 DEG 45 MIN W E	LONGITUDE of FIX		
C	N/A MB N/A M	MINIMUM HEIGHT of STANDARD LEVEL		
D	N/A KT	ESTIMATE of MAXIMUM SURFACE WIND OBSERVED		
E	N/A DEG N/A NM	BEARING and RANGE FROM CENTER of MAXIMUM SURFACE WIND		
F	252 DEG 132 KT	MAXIMUM FLIGHT LEVEL WIND NEAR CENTER		
G	171 DEG 23 NM	BEARING and RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND		
H	N/A MB	MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM FLIGHT LEVEL. IF EXTRAPOLATED, CLARIFY IN REMARKS.		
I	6 C 13556 M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE OUTSIDE EYE		
J	16 C 14018 M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE INSIDE EYE		
K	7 C 1 C	DEWPOINT TEMP / SEA SURFACE TEMP INSIDE EYE		
L	CLOSED WALL	EYE CHARACTER: Closed wall, poorly defined, open SW, etc.		
M	C45	EYE SHAPE/ORIENTATION/DIAMETER: Code eye shape as: C - Circular; CO - Concentric; E - Elliptical. Transmit orientation of the major axis in tens of degrees, i.e., 01-010 to 190; 17 - 170 to 350. Transmit diameter in nautical miles. <i>Examples:</i> C8= Circular eye 8 miles in diameter. E09/15/5=Elliptical eye, major axis 090-270, length of major axis 15 NM, length of minor axis 5 NM. CO8-14=Concentric eye, diameter inner eye 8 NM, outer eye 14 NM.		
N	12345/N/A	FIX DETERMINED BY / FIX LEVEL. FIX DETERMINED BY: 1-Penetration; 2-Radar; 3-Wind; 4-Pressure; 5-Temperature. FIX LEVEL (Indicate surface center if visible; indicate both surface and flight level centers ONLY when same): 0-Surface; 1-1500 ft; 9-925mb; 8-850mb; 7-700mb; 5-500mb; 4-400mb; 3-300mb; 2-200mb; NA-Other		
O	1 / 1 NM	NAVIGATION FIX ACCURACY / METEOROLOGICAL ACCURACY		
P	REMARKS MAX FL WIND 132 KT S QUAD 1637 Z			

INSTRUCTIONS: Items A thru G (and H when extrapolated) are transmitted from the aircraft immediately following the fix. The remainder of the message is transmitted as soon as available for scheduled fixes and at the Flight Director's discretion for unscheduled intermediate fixes.

NOAA AIRCRAFT OPERATIONS CENTER

Flight ID 030914 I



1. TENNESER
PILOT

2. TEBEST
COPILOT

3. BAST
FLIGHT ENGINEER

4. BLACK
STATION 1

5. FLAHERTY
FLIGHT DIRECTOR

6. NEWMAN
NAVIGATOR

7. DAMIANO
STATION C3X

8. FRENCH
STATION C3X

9. ULHORN
STATION 2

10. ABERSON
STATION 3

11. SMITH
STATION 3

12. LYNCH
STATION 4

13. VAN FLEET
PROJECT SEAT

14. STRONG
PROJECT SEAT

15. TONG
STATION 5

16. LASWELL
STATION 7

17. DRENNAN
STATION 7

18. SANS SOUCCI
STATION 8

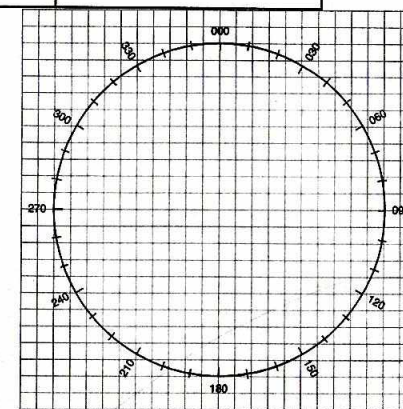
19. FLOYD
DINETTE

20.
GALLEY

21.
GALLEY

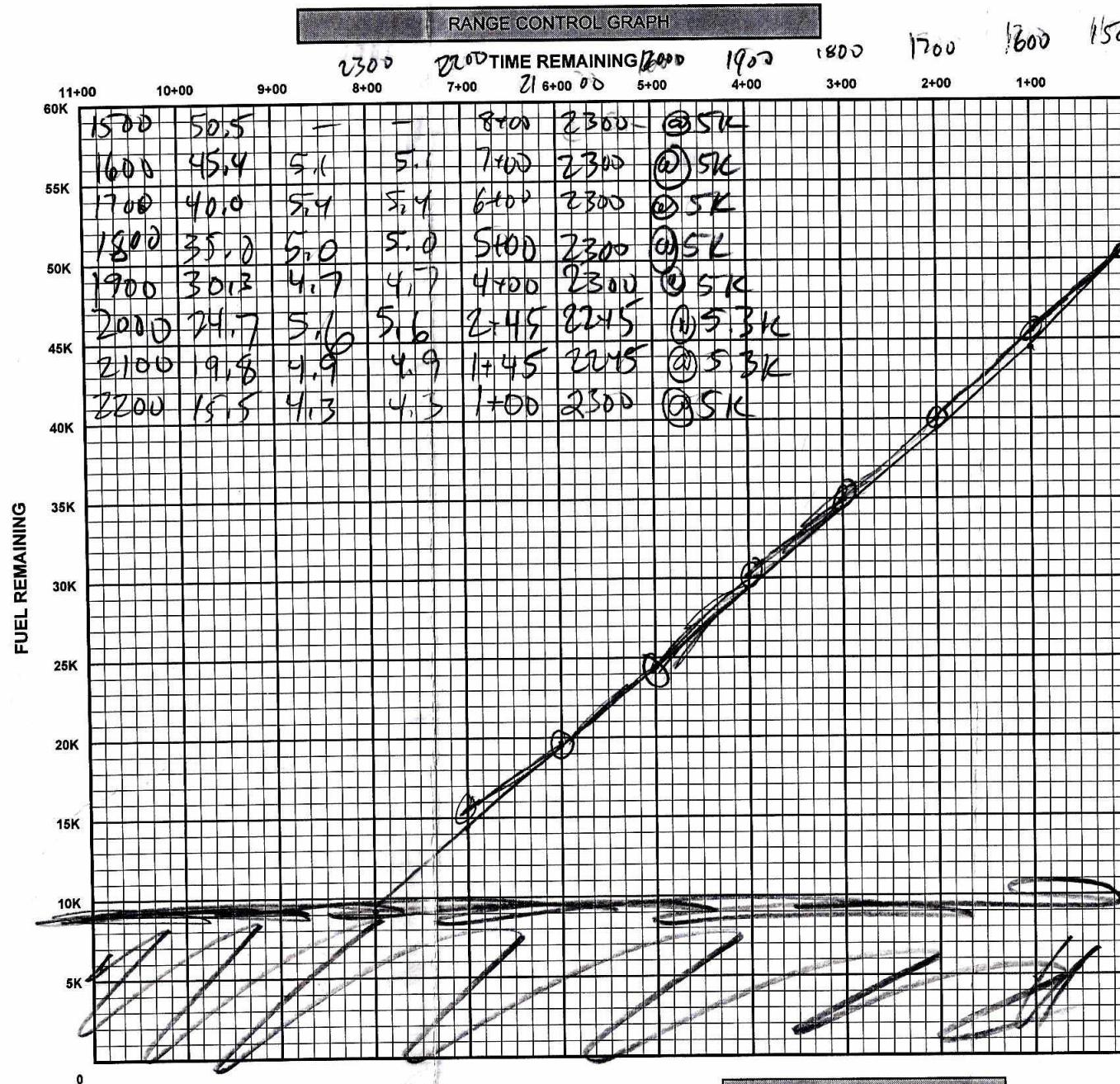
CG 1712

PAGE 1 OF 2



- WE HAVE _____ ENDURANCE REMAINING

[illegible]



ENROUTE FUEL	
ENROUTE TIME	8+00
ENROUTE FUEL (6K, 5K, 4.5K RULE)	38K
RESERVE AT DESTINATION	10K
REQUIRED RAMP	48K
ACTUAL RAMP FUEL	50.5K

TACTICAL (OFFSTA TO DESTINATION)		
	4 ENG	3 ENG
DISTANCE (OFFSTA TO DEST)		
ENROUTE TIME (OFFSTA TO DEST)		
BURN RATE (LBS/HR)	4500	5500
ENROUTE FUEL REQUIRED		
RESERVE AT DESTINATION		
FUEL AT OFFSTA		

POINT OF SAFE RETURN		
	4 ENG	3 ENG
ETP DISTANCE (TO DEPARTURE)		
ENROUTE TIME (TO DEPARTURE)		
BURN RATE (LBS/HR)	4500	5500
FUEL REQUIRED		
RESERVE AT DEPARTURE		
PSR FUEL		

F-FACTOR	PRESS ALT	200	250	300	350
	10,000	1.0	1.0	.99	.99
	20,000	.99	.98	.97	.97
	30,000	.97	.96	.95	.94
	40,000	.96	.94	.92	.90

TRUE AIRSPEED CROSS-CHECK						
TIME	IAS	PRESS ALT	"F" FACTOR	EAS	OAT	TAS
1602	212	11.5	X	X	+16	252
						250

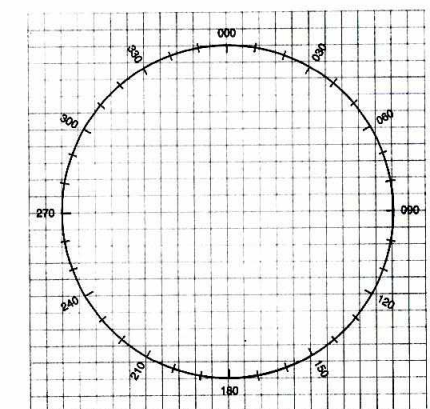
8+00

11
22

CEX - TRUE BEARING METHOD			
COMPASS TYPE	INS1	INS2	WET
MCH (READING)			
- MTH (SEXTANT)			
CE			
- VAR			
DEV			

CEX - ERB METHOD			
COMPASS TYPE	INS1	INS2	WET
MERB (DIAL 000)			
+ ZN			
= MTH			
MCH (READING)			
CE			
- VAR			
= DEV			

CEX SIGHT	
GMT	
GHA	
CORR	
GHA	
LONG +W -E	
EXACT LHA	
LAT	
BODY	
DEC	
HC / D	
CORR	
HC	
Z	
ZN	



[illegible]

INS PERFORMANCE		
	INS 1	INS 2
BEGIN ALIGN TIME	1233	1233
ALIGN STATUS (0-5)	0	0
END NAV TIME	2220	2220
START NAV TIME	1430	1430
DELTA T	7450	7450

TERMINAL ERRORS		
	INS 1	INS 2
DELTA LAT	-6.2	-7.1
DELTA LON	+3.3	-1.2
RGS	9	10
RADIAL ERROR	7	1

[illegible]

24

(G) - GPS (I) - INS (R) - RADIO (V) - VISUAL (C) - CELESTIAL (D) - DR

~~25 65 30~~ Bury 25 10 68-40 1830